

A
TREATISE
Concerning the
MALIGNANT FEVER
IN
BARBADOS,
AND THE
NEIGHBOURING ISLANDS:
WITH
An Account of the SEASONS there,
from the Year 1734 to 1738.
IN A
LETTER to Dr. *MEAD*.

By HENRY WARREN, M D.

LONDON,
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THE

Concerning the

MALIGNANT FEVER

IN

BARBADOS

AND THE

NEIGHBOURING ISLANDS:

WITH

An Account of the Seasons there
from the Year 1754 to 1758.

IN A

LETTER TO DR. MENN.

BY HENRY WALLER, M.D.

LONDON

Printed by H. B. S. in the Strand
1761

T O

Doctor M E A D,

PHYSICIAN to HIS MAJESTY.

S I R,

THE Character You universally bear, of being as much distinguished by your Humanity and Benevolence, as You are by your Learning and Skill in our Profession, has induced me to take the Liberty of sending You the following Short Treatise, and of desiring your Perusal of it. I have not the Vanity to think, that such a Performance as This can stand the Test of your accurate Judgment: But as it is founded on Observation and the Experience of many Years Practice, and consequently may be of Service in the Cure of a MALIGNANT FEVER,
the

DEDICATION.

the Nature of which (though it has now for several Years raged in This and the Neighbouring Islands) has not yet been rightly understood; I flatter myself, that, though it may not perhaps in every Particular merit your Approbation, yet it will, upon the Account of my good Intentions, meet with Pardon. Such as it is, I submit it intirely to your Censure, that it may, if you shall think it will be useful to the Public, be committed to the Press; but, if you shall judge otherwise, to the Flames. I am, with true Respect,

S I R,

Your most Obedient,

And most Humble Servant,

BARBADOS,
May 29, 1739.

HENRY WARREN.



A
TREATISE
OF THE
MALIGNANT FEVER
IN
BARBADOS, &c.



It has been often very justly observed, that we have no Malignant Distempers truly Indigenous, or Natives of this Island; and that such have always been brought in among us from some other infected Places: However, it is certain, that this, and the other *Sugar Islands*, have several times been visited by these unwelcome Guests, at uncertain Intervals and no stated Periods of Time.

A

'Tis

'Tis not my present Purpose to treat of those more common contagious Diseases, as Small-Pox, Measles, Scarlet-Fever, and the like; but I shall confine myself wholly to the present reigning MALIGNANT FEVER, which has hitherto unhappily been so little understood, and no just appropriate Method of Cure yet found out for it; having been most commonly mistaken for a *Bilious Fever*, and that specious Name espoused and affixed to it by some Persons of Judgment and Reputation; particularly in a Treatise published a few Years ago, concerning the Distempers of *Barbados*; which, I fear, has misled many unwary Practitioners into a false Notion of the Distemper, and so into a wrong Method of Practice, full of Danger and pregnant of Errors: For in that Discourse, whoever will be at the pains of observing, will soon perceive, that the Author (being perhaps deceived by some Phænomena that are common to all Acute Fevers) has blended together two most different Maladies, I mean the Malignant and the Ardent Fever of *Barbados*, in one and the same Description, without any Discrimination of the Symptoms that are proper and congenial to each, and plainly distinguish one from the other, comprehending or rather confounding both under the general Title of *Febris Ardens Biliosa*; and I am persuaded, that where he succeeded in his
boasted

boasted Method of Cure, the Fever has frequently been of the ordinary Inflammatory Class. A long and sollicitous Attention to the Rise, Nature, Symptoms, Progress, and Issue of this fatal Disease, has (I flatter myself) furnished me with such Lights and Observations, as may be of some Importance and Service to my Fellow-subjects; and I have, from my own Experience, just Reason to believe, that a conformable Practice will seldom fail of being attended with Success, provided the Physician be called very early, and no Administrations offered before he comes, particularly, Bleeding, Blistering, Vomiting, Purging, or Anodynes.

I am of opinion, that this Fever is truly of the *Pestilential* Kind, and ought properly to be called by no other Denomination. It resembles, very nearly (except that the Condition of the Blood is not the same) the Pestilential Fever described by Dr. Sydenham, which continued for some time after the Plague of *London*; and it is attended with many Appearances, peculiar to the Plague itself; the Plague-boil and the Rapidity and Ferocity of the Symptoms only excepted; so that it seems to differ from it only in Degree, but not in Species. The *French* call it sometimes, *La Maladie de Siam*, from a Country of that Name in the *East-Indies*, where it is a constant Inhabitant; sometimes they call it, *La Fievre*

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Matelotte, because Sea-faring People and New-comers are chiefly obnoxious to it; and probably it is the very same Fever, which the *Spaniards* call *Vomito Preto*, or the Black Vomiting, from one of its most dire Symptoms.

It has made two Visits to this Island, within the Space of these last sixteen Years: The first was somewhat above fifteen Years ago; and it was, at that Time, generally thought to be introduced among us from *Martinique*, in the *Lynn* Man of War, and committed much Ravage here for two Years or more.

The second Appearance it made was in the Year 1733, towards the latter End, or about the *Christmas* Holy-Days; since which Time we have never been totally free from it, tho' it has sometimes seemed to lie dormant for a Month or two together. This last Invasion was likewise from *Martinique*, from whence it was brought to us by an *English* Surgeon, who died of it here in a few Days after his Arrival.

I shall now endeavour to give some Account of its Origine: and, as I am conscious to myself that nothing sways me but an honest Candor and a sincere Love of Truth, I am not at all afraid of Censure, in pretending to derive it from a Country very remote, tho' what I advance may possibly be new to many, and consequently may occasion
Surprize

Surprize in those, who have hitherto been fixed in a Belief that it was a mere Native of *America*. I apprehend this Distemper to be really of an *Asiatic* Extract, as far as I am able to discover upon the most strict Enquiry. To support this Opinion, I shall offer the following Reasons.

Some small Time before Mr. *Nelson* (for that is the Name of the *English* Surgeon above mentioned) left *Martinique*, this Fever broke out there with very great *Malignity*, and soon swept away a Multitude of People, especially New-comers, and Seafaring Persons, such as had purer Blood, and probably less adust than that of the Natives; or of those, whose Constitutions had been for many Years fitted and habituated to the Climate.

The Occasion of this Calamity was thus: A *Provençale* Fleet came in, about that Time, to *Port St. Pierre* from *Marseilles*, on board of which were several Bales of *Levant* Goods, which were taken in by some Vessels of the Fleet in the Road of *Marseilles*, for the *American* Market, out of a *French* Ship that had just arrived from *St. Jean D' Acre* (probably the *Ptolemais* of the Ancients) where the *French* drive a considerable Trade, tho' the Place is seldom free from Pestilential Infections. Upon opening these Bales at *Port St. Pierre*, this Distemper immediately shewed itself,
many

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many of the People employed were instantly seized, some died almost suddenly, others in a few Days, and some linger'd longer; and the Contagion still spreading, made great Havock at the Beginning. This Account I had from the Mouth of the said *Nelson* a few Days before he died. As this raised my Curiosity very much, I was very solicitous in endeavouring to get further and more certain Intelligence; and within five or six Months afterwards, the same Detail was confirmed to me by a Gentleman of Understanding and Veracity, who at that Time resided at *Martinique*; with these further Circumstances, that the Distemper for some Time had abated there so considerably, that it was thought entirely to have left the Island, when suddenly another *Marseilles* Vessel arriving, brought it back a second Time, with more Rage and Violence than before. It is not improbable, that the same Fever, or one of very near Resemblance and Affinity, might first have been carried among the *American Spaniards* (among whom it is now Endemic) in somewhat a like Manner; and that possibly some peculiar Qualities of the Air and Climate might have fostered and maintained it there ever since: For I never learned that the *Indians*, or old Natives, were ever troubled with it, until their new Oppressors came amongst them. And I am apt to believe, that

that the Nearness of *Jamaica* to those Parts, with which there is a constant Trade and Correspondence, has been not a little injurious to the Health of its Inhabitants, besides a bad Air and Vapours from the Mountains.

I am not ignorant, that immense Tracts of uncultivated Lands, abounding in Woods, Lakes and Marshes, about which a corrupt stagnating Air perpetually lies brooding; or vast Mountains, whose Bowels are replete with divers Mineral Substances, may produce often *Epidemical* Malignant Diseases; but it seems to me very evident, that this is no way applicable to the present Case, nor can this Fever I am treating of, be reasonably attributed to any such Causes. For, *First*, the Air of *Barbados* is in general remarkably fresh and pure, and probably more salubrious than that of any other Sugar Colony. *Secondly*, The Land here, in respect of the other Islands, is the best cultivated, and entirely free from Lakes or Marshes; it lies so low as not to be seen by Mariners at any considerable Distance at Sea, and yet is agreeably diversified with Risings and Hills, on the very Tops of which the best Canes grow; and, unfortunately for the People, there are now no Woods at all, or what remains does scarce suffice for Fuel: Besides, its Situation is to the Windward of all others, and

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and at a greater distance from any Part of the Northern or Southern Continents of *America*; and it is well known, that many of the Inhabitants live to very advanced Ages. *Thirdly*, Neither the Alteration of the Weather or Winds, nor the different Seasons of the Year, have ever, of themselves, been able to produce this contagious Disease among us: Many Years (I may safely say seven, or eight, or more, successively) have, to my certain Knowledge, passed over, when the sultry Heats and long intolerable Droughts of some, the almost incessant Rains of others, or the tempestuous Weather of many, and that from uncommon Points of the Compass too, must surely, in some degree or other, have given Rise to such an *Epidemical Malignity*, if it could possibly be derived from such Causes; and yet no Footsteps of this Fever did appear all that Time; we were then sufficiently healthy, no other Distempers being felt but what all Parts of *Europe* are always equally subject to. *Fourthly*, I have often observed, and I think with great Certainty, that, even at the Time that this Malignity is actually harboured among us, a Continuation of dry and sultry Weather has been so far from giving any Aggravation to it, that it has rather seemed to repress it, and make it lie more lull'd and dormant, until the returning Rains, and a moist *Atmosphere*,

mosphere had set it at liberty to exert its Rage anew.

The Reader may judge as he thinks fit of this Account of the Origin of this Disease. I am satisfied that it was introduced amongst us, these two last Times, in the Manner now described; and that it is not by any means the natural Growth of this Healthy Island, but truly a foreign Intruder, let the first Causes of it be what or from whence they may. And I think the Violence and Horror of the Symptoms, as well as its contagious Malignity and Mortality, do sufficiently demonstrate its Nature to be Pestilential, which is the chief Matter I wanted to prove.

Upon the first Insult of this Distemper, the Symptoms are, for the most part, as follow; *viz.* a sudden Faintness, and frequently a Giddiness too, then a Chilliness and Horror, which are immediately succeeded by an Ardent Fever, with severe darting Pains in the Head and Small of the Back; the Face intensely flush'd, Redness and Burning in the Eyes, high-coloured crude Urine, the Pulse in some quick, high, and throbbing; in others, quick, low, and vacillating; the Skin sometimes (tho' rarely) parched and dry, but oftner, and indeed generally, moist and disposed for Sweat; early Deliria, great Tightness, Anxiety, and Oppression about the *Præcordia*;

Difficulty of Respiration, Sickness of the Stomach, with Reachings to vomit: The Blood now drawn is florid and rarified, with evident Marks of Colliquation, and without the least Sign of Size, that I could ever once observe; the *Insula* or *Crassamentum* (even when cool) upon moving it, undulates like Water in a Bason, and has sometimes blackish Spots here and there upon its Surface, with much yellowish Serum, upon which it extends itself wide and thin: Soon after, all these Symptoms are aggravated with almost perpetual Reaching and Vomiting, great Inquietude, incessant Jactations, no Ease in any Posture, scarce any Rest or Sleep, or that at best disturbed and unrefreshing.

This is the first Stage of the Disease, which I call the *Colliquative State*: It lasts sometimes only one Day, and sometimes two or three, or even more, according to the Degree of Infection, Constitution of the Patient, or the different Manner of Treatment; but the sooner it is succeeded by the next Stage, the more unhappy Situation the sick Person is in.

Now comes on an universal *Yellowness* all over the Surface of the Body, generally first discoverable in the Coats of the Eyes, with dark or blackish Circles round their Orbits, the Fever abates, the Pulse flags, the Skin all over moist and clammy, often
with

with a very sensible Chilliness, and the Urine of a dark, deep, croceous Hue: The Tongue at this Time appears generally moister and cleaner than in the former Stage, the Tip and Edges of it, as well as the Lips and Gums, of a more florid Red than usual, as if Blood was ready to start through them. Now frequently the Patient has a Heaviness to doze, and grows *comatose*, shewing Signs of much Confusion and want of Memory, whenever awakened from his unavailing Slumbers. However, it often happens about this Time, that (without a Coma) he shall receive some comfortable Rest and Sleep, which is often mistaken for a joyful Prospect of Recovery; but this flattering Scene is of very short Continuance. This Stage lasts sometimes only for the Space of some Hours, though sometimes it extends itself to the length of a Day or two, and sometimes a good deal longer, but very rarely.

This is the second Stage of the Distemper, which I chuse to call by the plain Name of the *Yellow State*; for the Words *Bilious*, or *Icteric*, I take to be very improper and inadequate Terms. This *Yellowness*, I am persuaded, chiefly arises from a more compleat Colliquation or Dissolution of the red Globules of the Blood into a yellowish Serum, which will naturally soon give that Tincture to the whole

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Skin.

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Skin. The same is often observable on human Bodies soon after the Bites of some poisonous Serpents, or other venomous Animals; and in such Case it cannot with any reason be supposed to proceed from a Suffusion of Bile, but rather from a Colliquation, and perhaps a gangrenous *Dia-thesis* of the sanguineous Mass, occasioned by the Force of the *Deleterious* Venom that had been infused into it. What is observed every Day in all common Bruises of the Flesh, may serve somewhat farther to illustrate this Matter; for here when the Texture of the extravasated Blood begins to loosen and dissolve into a liquid serous Consistence (in order to acquire a proper Fluor and Permeability for passing on, and being received again into the Mass of circulating Juices) a very visible Yellowness does always appear in and about the Part; but this soon goes off again, when the Matter is fully absorbed back into the Vessels, where it commits no Hurt, but is readily overcome by the Force of Nature, as the Quantity of such dissolved Blood is small, and at the same time very innoxious. I do not however deny, but that through a great Propensity and Straining to vomit, some Quantity of Bile may be thrown into the Blood; but then I must observe, that the Yellowness of this Distemper I am speaking of, very frequently shews itself, when

when there has been no Vomiting or Reaching at all, or scarce any sensible Sickness of the Stomach; for the Truth of which I can appeal to many: I must own likewise that the Bile, both that repositied in the *Cystis Fellea*, and that perpetually flowing through the *Porus Biliarius*, is the most alcalescent or putrescent Humour in the human Body, and may easily, if by any means grown more rancid, and so thrown largely into the Blood, give violent Disturbance to the Animal Spirits and whole Oeconomy, and even occasion dangerous putrid Fevers; but this I cannot believe to be the present Case: For then how comes it that Strangers and New-comers, whose Blood is purest and least impregnated with exalted Oils and Salts, should be most liable to this Disease? How comes it that the Natives of the *Torrid Zone*, whose Juices we may reasonably suppose to be more acrid and alcalescent, are however much less obnoxious to it, if the malignant Symptoms proceeded merely from a Suffusion of Bile? How comes it that all Sorts and Conditions of the People, who live in the same Island, nay, in the same Town and Air, shall never receive the Infection, provided they keep themselves a little out of its Reach, and at a sufficient Distance from infected Persons and Places? How comes it that the *Negroes*, whose Food is mostly

mostly rancid Fish or Flesh, nay often the Flesh of Dogs, Cats, Affes, Horses, Rats, &c. who mostly lead very intemperate Lives, and who are always worse clad, and most exposed to Surfeits, Heats, Colds, and all the Injuries of the Air, are so little subject to this Danger? Nay, supposing the Bile were ever so alcallescent, or even corrupted, or mixed ever so plentifully with the Blood, I cannot comprehend (without some *Pestilential Labes* were really added to it) that it should be able to act so cruel a Tragedy in so short a Time, as that of inducing an universal Mortification all over the Body and its Juices, and as it were causing a total Syderation of the Animal Spirits in the Space of Twenty-four Hours, as has sometimes been observed. I have only this to add farther, that it is notorious, every Acute Fever of any considerable Continuance does commonly leave some Sort of yellow Discoloration on the Skin, and yet this is never imputed to any Fault in the Bile, but rather to the Attrition or Dissolution of the globular Blood through the continued Force and Rapidity of its Circulation; and several Instances might be brought to shew how by this Means, especially where large Evacuations have been made at the same Time, the Blood has been rendered so thin, poor, and dispirited, that some of the extreme Parts have mortified,

tified, and even required Amputation. In Obstinate Agues, and in many Cronical Cases, the Skin is often discoloured in the same Manner; and so it is in Beggars and the poorest of the People, whose Blood is weakest and most depauperated.

I should not have dwelt so long upon this Point, but in order to obviate some egregious Errors of a late ingenious *Physician* of this Island, which, as his *Treatise* is got into many Hands, may possibly mislead many People in these Parts in their Practice and Judgments: Indeed I had the Pleasure of convincing him of those Mistakes, and I must do him the Justice to declare, that he frankly retracted his Opinion before he died, and would willingly have called in the Copies, could he have found Means of doing it.

This Condition of Things is seldom of any Permanency, the Scene is again soon shifted, and now many terrible *Harbingers* of the expected *Catastrophe* appear: Blood flowing out by the Nose and Mouth; large Quantities of black mortified Blood voided both by Vomit and Stool; the Urine almost quite black, the Pulse low, tottering, unequal, and intermittent; most difficult and laborious Breathing, Startings, horrible Anxieties, with almost constant Deliria, Faintings, Hiccups, cold Sweats, Death-like Coldness in all the Extremities, though at the
same

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same time an intense burning Heat, with torturing Labour and Oppression about the Heart; now an intire Loss of Reason and all the outward Senses too, with livid Spots in many Parts of the Body, principally about the vital Region, which Symptoms are soon succeeded by Death dreadful to the Beholders.

This is the third Stage of the Distemper, which I think I may justly call the *Gangrenous State*. Soon after Death, the Body appears much fuller than before of *livid Blotches*, especially about the Region of the *Præcordia*, which from the Beginning seemed to be the chief Seat or Throne of the furious Conqueror.

In this Manner and Order the Disease invades and proceeds in its middle or most ordinary Form. But there are some extraordinary Shapes of it too: For in some Instances, the Violence of it from the first Hour is so intractable, rapid, and precipitant, and it bears so very great a Likeness to the Plague itself, that it gives no room at all to discriminate its different Stages, the whole Tragedy being finished in the Space of twenty-four, thirty, or forty Hours, with the most direful Symptoms, and a purple Hue, much inclining to black, covering almost the whole Body, even before the Article of Dying, or at least immediately afterwards.

And

And on the contrary it happens sometimes, that this Fever, both at the Beginning, and throughout its whole Course, is attended with less Danger, and fewer and milder Symptoms, than those enumerated above in the ordinary Form, and is most easy to be overcome; but yet even in this Case of Serenity and seeming Security, Danger is readily invited or brought on by over-hasty, bold, and improvident Administrations.

It is proper here likewise to mention another Observation of very singular Moment. I have seen sometimes (tho' I must own but seldom) when there was great seeming Danger and Distress, that the sick Person has been suddenly and unexpectedly relieved by a large critical Eruption of Boils or small Abscesses all over his Body. To explain how and from whence this favourable Phænomenon arises, it will be necessary to give a short View of the Natural Tendencies of Inflammation in general. There are three principal Ways, by which Inflammation is usually determined; *viz.* Resolution, Suppuration, and Mortification or Sphacelus: The first, which is the commonest and safest, may every Day be observed in all light Inflammations, and even in most Fevers, where, by Evacuations, and the Use of Attenuant Medicines, the Obstructions are removed, and the Ob-

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struent

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struent Particles rendered so thin, as to be capable of passing forward and being received again into the Laws of Circulation: The second (which is applicable to the Case I have just mentioned) happens, when the inflamed obstructing Matter, being of a large Quantity, and yet of a mild Nature, is maturated and digested along with some of the tenderest obstructed Vessels into a whitish, thick, fat, glutinous Humour, called *Pus*: This is observable in Boils, Buboës, and in all Abscesses or Imposthumations, some degree of Fever being required to ripen and perfect it; and it is attended with little Danger, unless the suppurated Matter be unluckily translated upon some of the Noble Viscera. The third happens through a malignant Acrimony of the Humours, by which they tend to be changed into a thin, corrosive, *gangrenous* Ichor or Sanies, especially when accompanied by a great Loss or Depression of Spirits, or too sudden a Sinking and Abating of the Fever: This is most commonly the Case in the Plague, and in all Pestilential Infections; but even in the Plague itself, when the Boil or Carbo happens to be rightly inflamed, and then to suppurate kindly, without sinking or growing soft and livid, the infected Person often escapes with Life.

I have

I have now described this Distemper as well in its commonest and most ordinary, as in its extraordinary Shapes: As to its extraordinary Appearances, it is no hard matter to foresee soon, what Event may reasonably be expected. But when it appears in its most common Form (though God knows that is dreadful enough) I can safely, without Offence to Truth, declare, from my own repeated Observation and Experience, that it is not at all insuperable, but may be happily overcome by a just and prudent Conduct; to which, even the Jaſtations, Deliria, Vomitings, Sighings, Anxiety, and Oppreſſion, Bleeding at the Noſe and Mouth, &c. will readily ſubmit; provided due Care be taken, and that early at the Beginning, to divert the acrimonious infected ſerous Particles from the vital Parts, and extrude them out of the Body by the proper Organs of Sweat and Perſpiration. It has been mentioned before, that New-comers and Sea-faring People are moſt liable to this Contagion; but it muſt be obſerved, that it ſometimes (though more rarely) invades the Natives too, of whom at Times I have had many under my Care. Indeed, had the Inſtances of its deſtructive Rage been ſo frequent among the Natives, eſpecially thoſe of Opulence and Diſtinction, as among Strangers and this lower Claſs of poor Mariners,

it would, without doubt, have made much more Noise, and raised much more frightful Alarms, than it has hitherto done.

I have, in general, remarked, that it seizes the unfortunate Person most commonly, *1st*, After hard Drinking and sitting up late o' Nights, and then, exposing the Body to the damp, chilly, Night Air; *2^{dly}*, Upon any too violent Exercises of the Body, by Labour, Walking, Running, Dancing, and the like, and then cooling in the Air, too suddenly, without sufficiently defending the open Pores; *3^{dly}*, Upon drinking large Draughts of cool Liquors, particularly cold Water, upon the aforesaid Occasions.

The poor common Sailors, who notoriously suffer most of any, while they remain in our Ports, have perhaps less Conduct in their Way of living than any Sett of People in the World, drinking ever hard of the vilest and cheapest strong Liquors when ashoar, and then going off upon the Water with Breasts open, and their Bodies poorly covered, even in the Night: Besides, if there be any Impurity in the Air of our Island at all, it must be only about the Wharfs, where always is the chief Resort of Sailors, either for Business or Pleasure; and it is not unlikely, that those may be the most proper Places for harbouring, improving, and spreading the

the Contagion, when once it has got Footing amongst us.

It will be readily granted, that the Pest, Pestilential Fevers, and other Contagious Distempers, operate upon our Bodies by poisonous Qualities, destructive of the human Oeconomy; and that their Virulence consists of Particles truly material, though halituous or volatile, and no ways to be perceived by any outward Sense. These Particles, being by any means infused into and mixing with our Juices, do soon change such Liquids as they first meet with, into their own Likeness and Nature, and these again infect others in a sort of proliferous Manner, until the whole Mass becomes contaminated; and this happens more quickly or slowly, according to the different Force of the peculiar Venom, or its different Mode of acting, as appears plainly by transiently comparing the Plague, Spotted Fever, Small-Pox, Leprosy, *Lues Venerea*, &c. It is certain, that almost all Poisons have a distinct specific Power, each operating constantly in its own Way and with great Regularity, though all with a wonderful Disparity of Effects: And this appears still more manifestly in the Symptoms arising from any such Poisons as are received from noxious Animals or Vegetables, &c. whose Venom is more gross and material, and consequently more evident

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dent to the outward Senses. Of these, some produce surprizingly very different Distempers; so the Bite of the Viper and Sting of the Scorpion, do in a very few Hours deform the whole Surface of the Body, by a most filthy Sort of Jaundice; the *Cicuta Aquatica* creates Convulsions, Madness, and Epilepsy; the *Solanum Somniferum* affects by Narcosis and Stupefaction; the Bite of the Asp gives a gentle though fatal Lethargy; and of late Years the distilled Water of Laurel Leaves has been found to destroy almost instantly, by blasting as it were at once all the Animal Spirits, without leaving any visible Marks on the Body or Bowels; Vapour of Lead brings on the Palsy; the *Dipsas* kills by an enormous Thirst; the *Amphisbæna* or *Hæmorrhous*, by occasioning a Bleeding out of the Ends of all the Capillary Arteries; the *Seps*, by Putrefaction and Gangrene; the *Physeter*, by inflating or blowing up the cellulous Membranes all the Body over, so that the wounded Person shall in a small Time be suffocated, and as it were buried within his own Skin. Some do chiefly affect particular Parts of the Body, as *Cantharides* the Bladder; *Opium* the Brain; the *Solanum Furiosum* the Eyes, by taking away the Sight; the *Apium Rifus* or *Herba Sardoa*, the Diaphragm, by throwing it into tremulous Concussions, and

and so imitating Laughter. Others, again, are highly noxious to many Creatures, and yet are the Food of others; so Goats eat Hemlock; Hogs, Henbane and Mandrake; Storks and Ostriches eat Serpents and Toads; Hens and Marmosets devour Spiders greedily; and Swallows have been, in some Parts, observed to feed upon *Cantharides*.

Many more Instances of this wonderful and inexplicable Variety of the distinct Powers of Poisons might easily be brought; but none so intirely eludes our Search or baffles our Reason, as the Virus of Pestilient Fevers; infomuch, that no Writer has been so weak or so hardy, as to undertake an Explanation of the peculiar Indoles or constitutive Principles of their *Miasmata*, any other Way, than by making loose and vain Conjectures; the Ancients attributing the Cause to Forms and occult Qualities, and some of the Moderns to venomous Volatile Salts and Ferments, others to imperceptible pestiferous Insects, &c. so that the Matter is still left as abstruse and mysterious as before. But this is certain, that there must be fit Conditions in the Air to foment and propagate such Particles, besides an Aptitude and pre-disposing Crasis in the Juices of the Body to receive and entertain them, for which some Men are more qualified than others.

However,

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However, this or any other Halituous Infection may be communicated many Ways, and principally by the three following; *viz.* 1st, By immediate Contact of the distempered Subject, either living or dead, his Clothes, Spittle, or the like; 2^{dly}, By inspiring the Contagious Effluvia into the Lungs along with the Air, or by swallowing them down into the Stomach along with the Spittle or Food; these two Ways are presumed to be the most ordinary; and 3^{dly}, By being from the ambient Air insinuated or imbibed into the Absorbent Pores of the Skin, and so mixing soon with the Lympha, and then with the Venous Blood, along with which it is directly carried to the Heart; for the whole exterior Surface of our Bodies is immensely full of Absorbent Pores and Vessels, that arise from a fine Net-work or Intertexture of subcutaneous Veins: This has been observed by *Ruysch* and *Eustachius*, and the Truth of it is confirmed by many undeniable Experiments: But the Danger of being seized this Way is very different, according to the Distance from, or Nearness and Vicinity to the infected Person or Place. It has, of old, been a popular Remark, that Contagious Diseases are caught frequently, not only after great Debauches with strong Liquors, by which the Spirits are the next Day much prostrated, but even upon any Dejections of

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Mind, Frights, and the like, particularly in the Case of the Small-Pox; and this is vulgarly imputed to the Animal Spirits retiring to the Center, and gathering about the Heart, and so leaving the Out-lets or Avenues unguarded: Let the Reasoning be how it will, the Observation is of good Weight; and I have often had some Grounds to think, that it might take place in This MALIGNANT FEVER too, having seen it lay hold on most of those, who were under the greatest Uneasiness and Apprehensions about it *.

The Nature of this Distemper might long ago have been much better understood, and a more certain Method of Practice found out for it, if some discreet and ingenious Practitioners, who were equal to such a Task (of whom I am persuaded there have been several here at Times) had only waited calmly and leisurely at the Beginning of its first Appearance, and weighed with due Attention the regular Course of the Fever, observing carefully the Rise, the Increase, the gradual Successions, and the Recess of its Symptoms, neither disturbing their Constancy, nor inverting their Order, by Bleeding, Blistering, Purging, &c. and

* Multi ex solo timore & imaginatione inciderunt in Fe-
brem Pestilentialem. NICHOL. MASSA.

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only giving proper Diluents and Resolvents, and (if Circumstances required) a few of the easiest and mildest Medicines: By this means, both the Safety of the Community, and possibly the Health of the individual Patient, might be better consulted, and the Method of Practice reduced to a very great Exactness and Certainty. But unluckily, either too much Impatience on the Side of the Sick, or too great Hastiness, Sufficiency, or Prepossession on the other, has hitherto prevented the World's being obliged with any established Rules. In this Posture then, not only of Uncertainty, but even of almost utter Ignorance, how is it possible to devise and prescribe any safe and salutary Remedies, or to be able to distinguish between the *Juvantia* and the *Lædentia*? Surely, without a competent previous Knowledge of the Disease, no Method of Cure can be fixed at all; and in such a Case, it must be acknowledged, that the most able Physicians are mere Adventurers, and unfair ones too, in a Matter of no less Concern than the Lives of their Fellow-creatures: If the Patient has the good Fortune to recover from his Illness, and out of their Hands, it is assuredly more owing to his own Strength of Nature, and happy Temperament of Body, than to their Art or Advice.

I scorn

I scorn to speak this with a Design of giving the least Offence to any of the Faculty, even in its inferior Branches, but purely out of Love to Truth, and with a Candor becoming an honest Mind.

However, for the Unsuccessfulness of the common Practice, there may be several more immediate Causes very justly assigned. The first is, either the mistaking this Malignant Disease for a common Inflammatory Fever, and treating it as such, even when evident Signs have been discovered of an uncommon Malignity; or the being inadvertently overswayed by the vulgar Opinions, that these Sort of Fevers are truly *Bilious*. The second is, giving precipitately too many and too great a Variety of Medicines, when it is certain, that Nature in all her Distresses and Complaints, as a good Oeconomist, requires but a few, and is sure to be hurt by Numbers, the Cure depending always on the right Choice, and not on the Multiplicity or Quantity. The third is (besides an almost invincible Prepossession in favour of an old deep-rooted Opinion) a strong vulgar Prejudice against any Positions that are new: The ignorant Many never fail to raise early Clamours, when they find Feverish Indispositions treated in a Manner very different from what they may have seen used in their own Families on common

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Occasions, and perhaps attended with Success; and as they are weak enough to imagine all Fevers to be alike, and of one and the same Species, a Physician must undergo their Censure, if he neglects or discourages Bleeding, Blistering, Vomits, &c. Fourthly, the obstructing or preventing Nature's own Way of operating by the Evacuations just mentioned, and so throwing all the Symptoms into a perfect Anomaly and Confusion; that often there is a meer Impossibility to assuage the Hurry, or repair the Mischiefs committed by them. There are many Practitioners in this Island, (exclusive of a few Graduate Physicians) and some among them Men of good Understanding and Abilities; these are generally first sent for, before a Physician is called upon: To such I have many times explained my Thoughts on this Subject, and convinced them by my Reasons: Yet I have often lamented, that they had not been able to withstand the Solicitations and Importunities of the sick Person, or of his Relations and Friends, but were prevailed upon to Bleed, and perhaps Vomit and Blister too before I came.

By what I have already advanced, it may be easily perceived, that I do, in a great measure, forbid the ordinary Evacuations, by Blood-letting, Emetics, Vesicatories, or Purgatives, in this Pestilential
Fever,

Fever, in which, from long and attentive Observation, I declare them to be generally pernicious and destructive in their Consequences, I mean, in the Manner that has been usually practised. Vomits and Blisters I do utterly discard; but Bleeding and Purging, with proper Restrictions and Cautions, may sometimes be allowed of in certain Cases, and at certain Times, when they may not only safely, but must necessarily be done, as shall be shewn hereafter in a proper Place: However, the Physician must be exceedingly wary, and very diligently weigh, how far, when, and on what Occasions, they may be of Use. For what I have asserted I shall offer my Reasons, which I hope will appear sufficiently cogent and convincing to every Rational Man, as well as to Judges in Physic.

First, As to Bleeding: I have already shewn the Texture of the Blood to be here over thin, rarified, and dissolute, with a plain Tendency to Mortification, which it is well known that Bleeding will promote, by giving more Room for Expansion and Rarefaction, and so occasioning a further Liquefaction of the circulating Fluid, as well as by producing Weakness and Prostration of Spirits: This Loss of Spirits is very severely felt in the Course of the Disease; and much more so, when
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the Operation had been performed with a liberal Hand, or repeated two or three Times, as has been too often practised. For the Truth of this Observation, I appeal to all who have been conversant in the Business of Medicine here during this reigning Constitution, who I am persuaded will readily own, that taking away Blood in a large Quantity or often, and especially after the first Day, has always aggravated the Disease, and exasperated all the Symptoms, and laid a sure Foundation for inevitable Ruin. I must acknowledge, that when I am very early called, if the Patient has been a very hard Drinker, or gross Feeder, or is of a sanguine Complexion and full Habit, or the like, I order a Vein to be opened, and take away some Ounces of Blood, more or less as Circumstances seem to me to require: But I am for the most part sparing, and always cautious of repeating it again; having ever found, that even this one Operation has certainly given a manifest Exacerbation to all the Febrile Phænomena. In phlegmatic Constitutions I seldom allow it to be performed at all, and I am sure I have seen many such suffer for admitting it. One main Inducement to Bleeding, besides those above set forth, is, that it gives an Opportunity of examining the Blood's Consistence, and the Colour and Nature

Nature of the *Serum*, whereby a more distinct Idea of the Distemper may be formed. However, I aver, that I have often very happily succeeded, where the Persons have not been bled at all, tho' of the grossest and most plethoric Habits.

'Tis true indeed, that common Fevers, in these hot and Sun-burnt Parts of the Globe, do generally make a much quicker Progress than in colder Climates, and consequently require large and speedy Evacuations at the Beginning; for which Reason Recourse is had here to Venesection almost upon every little Heat that exceeds the Natural, and often both idly and ignorantly: Nay, the Vogue for it is so great, and the Custom so common, that every raw unexperienced Practitioner (perhaps just emancipated from an Apprenticeship) will immediately use the Lancet, when he does not know the Disorder, or what else to do: Of these absurd Proceedings there are too frequent Instances. By such Dabblers in Practice, I have known Blood to be drawn in the Dropsy, in a Palsy, even in the Paralytic Member, on which a Gangrene has sometime ensued, in deplorable Tabid, and in low Hysterical Cases: By such, I have known Blisters applied to the Small of the Back for the Pains of Gravel, to the Throat for a Quinsy,

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Quinsey, and to the Pit of the Stomach for the *Cardialgia*: By such I have known Emetics administred in the Iliac Passion, in Angina's, in Consumptions, &c. in the very Agonies of Death itself, when all possible Hopes of Relief were absolutely over. By such, likewise, I have known Anodynes given in the worst Apoplectic and Lethargic Cases; and Purges ordered during the Eruption of the Small-Pox, early after Child-bed Labour, in the lowest State of Consumptions, and in the Beginning, or even the Height of the *Colica Picavorum*; in which last Case there often ensues, either a Loss of Limbs and Speech, or a Mortification of the *Ileum*, in that Part where the Spasmodick Constriction is seated.

By the way, as I have just mentioned the Dry Belly-ach, I beg Leave (though 'tis not to my present Purpose) to observe, that it is a Disorder as easily to be managed, and as safely to be cured, as any of the whole Tribe of Diseases incident to the human Body, and that merely by *Anodynes* mixed with *Antibysterics*, given carefully at proper Intervals, and in sufficient Doses, *viz.* two or three Times in the Space of every twenty-four Hours, until, by an intire Absence of Pain, the Constriction or Spasm appears to be quite gone over; and then any mild Purgative (such

(such as is not of too windy a Nature, as Manna, or the like) will be useful to compleat the Cure.

I cannot avoid likewise taking notice here (though it is out of my Way) that a very odd and unwarrantable Practice has obtained for many Years among several of the Plantation Practitioners in this Island, of giving *Calomel* in Inflammatory Fevers, when the Blood appears to be much loaded with Size, in order, as is pretended, to remove its Siziness, by rendering its Particles thinner, or less viscid and cohesive. This Practice is much condemned by all judicious Physicians at Home: And if these Gentlemen did but thoroughly understand the true Nature of the Size, and the inward Operation of *Mercury*, I am persuaded they would be more cautious of playing with so dangerous a Weapon. The Thickness or Lensor of the Blood cannot be removed at once, or of a sudden; but many Days are required to reduce it to a due Fluidity; and this End is to be gained chiefly by Evacuations, and a plentiful Use of Resolvent Diluters. The *Serum* of the human Blood, in all Chymical Processes, does exactly resemble and answer to the White of an Egg, and is coagulable by the Heat of Fire, or in rectified Spirits of Wine: Now let us suppose the Heat of the Body and the circulating Fluids

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to be by any Means (particularly by a Fever) so much increased, as greatly to exceed the Natural; it will follow, that many serous Particles will receive some Degree of Coagulation, and so form themselves into *Sizy Ramenta* or Filaments, as the *Albumen* is soon observed to do, when put into hot Water, though many Degrees below that of *Ebullition*. Besides, it is known to every one who has been but a little conversant in Physic, that Blood drawn immediately at the Beginning of a Fever, shall most commonly be very free from *Size*, and of a fine florid Complexion; and yet, after twenty-four Hours, take more Blood from the same Person, its Surface shall be covered over with a blueish or whitish glutinous Substance, the *Serum* having then undergone a sort of Coction (if the Boldness of the Expression may be excused) from the intense, unnatural Heat of the Body, and Ardency of the Fever. I pass over many other Physical Reasons, and shall only mention, that the same may indeed be caused likewise by a large Ingurgitation of Spiritous Liquors, or by over-violent Motion and Exercise, of Riding, Dancing, Running, Wrestling, Boxing, and the like. Can it now, with any Shew of Good Sense, be imagined, that a Dose of *Sweet Mercury* or *Calomel* can
loosen

loosen and dissolve such Concrescencies and Cohesions? As to Mercury's operating inwardly, it is granted, that, when mixed with the Blood, and passing along with it through the Heart, it affects to take its Course almost in a direct Line through the Ascending Trunk of the *Aorta* up to the Head and superior Parts; for by the Laws of *Hydraulics*, the weightiest Particles, of equal Minuteness and Sphericity, will always flow quickest and in the straightest Lines; and every Anatomist can tell, that this upper Passage from the Heart is much more direct than that through the Curve of the Descending Trunk. Indeed where there is no Fever, and the Velocity of the Blood is not extraordinary, the Mercurial Globules pass along easily enough, and without Danger, or are sometimes inviscated in the Salival Glands, and so raise a *Ptyalismus*; but when the Velocity of the Blood is exceedingly increased, as in Ardent Fevers, what Ruin and Devastation must this active Medicine commit in the soft Substance of the Brain, among Vessels of inconceivable Exility and Tenderneſs? I have been, on some Occasions, Witness of its severe Effects, and I then observed, that in some Time after the Dose was taken, the Person has grown Delirious, and soon after died in a miserable raving Condition. Some, 'tis true,

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may

may happily escape; but I am certain, that if only one in fifty perished by that Means, it were enough to deter a wise Man from ever giving it again on the like Occasions. I have never yet heard of *Mercury* being given in this Malady I am treating of, and I hope I never shall, as no doubt it would here act an uncommon mischievous Part. Perhaps this Digression may carry its own Apology with it, as being a Monitory or Warning against such Mistakes.

Secondly, As to *Emetics*: These come usually next in Order, and the unfortunate Patient must immediately after Bleeding have a Vomit cramm'd down his Throat, especially if he shews any Signs of Sicknes of the Stomach, or Oppression about his Breast; even the By-standers will usually solicit hard for it; and a modest Man may not always have Firmness enough to resist their clamorous Instances. I have too often by Experience found, that Vomitives enrage the Distemper, raise an unappeasable Hurry and Tumult in the Spirits, grievously affect and irritate the Nerves of the *Plexus Cardiacus*, and all the Nervous Membranes about the *Præcordia*, give a further Dissolution to the Blood, and in short (if I may use the Phrase) raise a Dæmon that is scarce ever after to be laid, but by the Death of the Patient. I have indeed

indeed sometimes seen the sick Man escape with much Difficulty through this Danger; but, generally speaking, the Effects of such an Administration in this Distemper are so dismal and surprizing, that the Stomach will receive neither Medicine nor Sustenance for the future, until after the most laborious and painful Concussions, Hiccups, and almost Convulsive Contractions of the Parts, Signs of inward Gangrene discover themselves, and Nature's Strength is at length quite spent and worn away.

Thirdly, As to Vesicatories: After Vomiting premised, this is ordinarily the next Step taken by the unwary Practitioner; which Custom has made almost sacred, and the Fear of Reproach almost unavoidable, at least in these Parts; for I am fully satisfied that more Blisters are made use of yearly in this and the other Sugar Colonies, than in the united Kingdoms of *Great Britain*. It is well known, that the Salts of *Cantharides* do thin and attenuate the Blood, and therefore in Inter-current Fevers they are very commonly applied to rectify the Thickness and Viscidity of it, and frequently are of remarkable Advantage and Use; but in this State of *Colliquation*, it is easy to perceive, that such Applications can be of no Service, but on the contrary must be highly detrimental: They cause a greater Solution and
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Comminution of the red Globules, exalt the Acrimony, and superadd a quicker Force, Poignancy, and Activity to the Infectious Particles; besides, by inflaming the Bladder, stopping the Secretion and Excretion of Urine, and by the other Torments they produce, they increase the Restlessness of the Body, and the tumultuous and inordinate Motion of the Spirits: It is notorious too, that in this Fever, when the Blisters are first cut, so deep a Redness is usually seen in the naked Flesh, that some Degree of Mortification may justly be dreaded and soon expected, unless happily prevented; the Colour many times changing into purple, plumbeous, livid, and at length almost perfect black, with a Quantity of Sanious Blood oozing through the blistered Part, even when the Body is still alive, and often after Death.

Fourthly, As to *Purgatives*: I can with Truth affirm, that there is very little Occasion for this Administration, provided copious Sweating has been provoked and continued for a sufficient Time at the Beginning of this Disease: And, in particular, I can aver, that the unwary giving of strong Purges after plentiful Discharges by Sweat, especially if often repeated, are exceedingly noxious; so likewise, when they are given too early, and during the Height
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of the first Feverish Tumult, or in such large and full Doses, as the Body might have been accustomed to in a better State of Health: I have observed them very apt, in this dissolute Condition, to occasion either an *Hypercatharsis* or a *Diarrhæa*, by means of which, the Patient's Strength is soon so prostrated and exhausted, that he wants Spirits to support him through the Remainder of his Illness; and consequently, the Disposition to Mortification is remarkably promoted, and a deadly Coldness comes on in the extreme Parts; inso-much that the Tragedy soon ends in black bloody Stools and Vomits, Fainting, Syncope, and Death.

In some Constitutions I have met with a natural Proneness to *Alvine Dejections*: And here I think it requires the Physician's best Art and Diligence, either to repress them seasonably, or to manage them so dextrously, as to make them of real Service to the Patient. In others, I have known a sudden Flurry of several Stools unexpectedly arise, which have so surprizingly sunk the Forces of the sick Person in a very few Hours, that the most speedy and studious Endeavours were required to prevent the impending Horrors, and that frequently too without Success.

I ought to observe here, that the fatal black Stools and Vomitings are vulgarly supposed

supposed to be only large Quantities of black Bile or Choler; which false Notion seems to be owing to that fixed unhappy Prejudice, that the Fever is purely *Bilious*. But let any one only dip in a Bit of white Linen Cloth, he will be soon undeceived, and convinced that scarce any thing but mortified Blood is then voided; for the Cloth will appear tinged with a deep bloody Red or Purple, of which I have made many Experiments.

Notwithstanding what has been said, I do readily acknowledge, that there may be sometimes just and sure Indications for the prescribing of light Lenitive Purges, such as Manna, Cassia, Lenitive Electuary, or the like; which, for greater Security, I recommend to be given dissolved in Sack-whey, in small Doses, with convenient Intervals between each Dose, until some Tokens are felt of approaching Purgation. But there are certain enough Rules, if duly attended to, whereby to judge, when and how far the Use of them may be safe, advantageous, or necessary: The great Rule, in my Opinion, should be this, that the *Sudorific* Method has been unhappily rejected, or the true and proper Season for it suffered to elapse; to which may be added these others; *viz.* a Costiveness of Body, full Bowels, Uneasiness from the Retention of Excrements, Abatement of
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first Feverish Impetus, Sufficiency of Spirits and Strength, Obstinacy of the Yellowness, and the like. In this Manner, on such sure Indications, and with such Cautions, I think the same Lenitives may be repeated two or three Days running, as the Circumstances of the Patient concur to require them, or shew him capable of bearing them: Nor need the Practitioner be deterred, though the Vomitings do still remain, or even the *Yellow State* is come on; provided the Yellowness does not shew itself within the first two or three Days, nor is very deep, plentiful, and universal; for in such a Case it never fails to be a mortal Presage, as even all the old Women and Nurses that tend the Sick can vouch; so far is it from being the Happy Crisis that some have imprudently alledged. When the Bowels are kindly opened by these Means, I have with Satisfaction observed, that very putrid Fæces were expelled, the Secretion of Urine enlarged, the Intestinal Glands cleansed, much of the corrupt and infected Serum carried off, and consequently the Yellowness either prevented or sensibly lessened, and in some measure removed. But great Care should be had to keep up Nature's Strength and Spirits, by giving now and then a little warm *Madera* Wine, Canary, or such

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Cardiacs as are not too inflaming. However, I must give this Notice once more, that the Purging I have here recommended, is for the most part rather from Necessity than Choice, there being no other practicable Way of Safety now left; and this principally from having unadvisedly omitted the seasonable Extrusion of the Morbific Matter by Sweat, while the short-lived Opportunity presented itself.

I flatter myself that I have now given satisfactory Reasons for what I had so strenuously advanced concerning the Danger, and against the improvident Use of the above-cited Evacuations. And I call upon every candid Practitioner, who is capable of judging right, and has had Occasions of long Experience in this Disease, to declare, whether he has not found these Observations to be agreeable to Truth, as well as his own Reason; or whether he has ever once seen the sick Person receive real apparent Relief or Advantage from any of the aforesaid Administrations, except in the Manner, and with the Cautions I have now advised, but rather (indeed almost ever) exactly the Reverse; though possibly here and there a lucky Patient might have passed with Life through that *Ordeal Trial*.

As I am now upon the Subject of the *Lædientia*, 'tis proper, before I proceed to
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the Method of Cure, to give some necessary Cautions concerning the Use of *Anodynes*. That Anodynes contribute to expand and rarefy the Blood, as well as often to induce *Gangrene*, No-body, I believe, will be hardy enough to deny; and so far they must in this Disease be undoubtedly hurtful: But, besides the physical Reasons, what I have principally to offer from my own certain and constant Observation is this, that upon taking an Anodyne (which the Patient himself often sues hard for to obtain a little Rest, or to stop his wearisom Reachings) the *Yellowness* shews itself generally the next Morning all over the Surface of the Body and the Whites of the Eyes: Indeed the Fever will thereupon seem somewhat to abate; but I have demonstrated before, how unhappy and almost deplorable his Condition then is. But if there should be any Case at all that will any wise admit of an Anodyne, it is only when a *Diarrhæa* or *Hypercatarsis* calls loudly for instant Relief; and even then, I am of Opinion, that the Dose ought to be light, and of the rich *Alexipharmac* Kind, such as the Confection of *Andromachus*, or the like.

I must here subjoin another Remark, which I think is of no small Consequence. Almost all the best Writers in Physic have

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strongly recommended a free Use of nitrous and subacid Medicines and Liquors in all Inflammatory Fevers of the Inter-current Kind, and with good Reason too, as they slake the Thirst, assist in attenuating the thick Blood, and kindly move both by Urine and Perspiration: But in this peculiar Fever I have had many Opportunities of being persuaded that they offend the Stomach, and create a Nausea and Vomiturition, perhaps by their too chilling and refrigerating Qualities: It is certain, that Nitre here in any Form has these Effects; either in its pure Salt, or made into *Sal Prunellæ* or *Polychrest*: I have even found, that sweet *Spirit of Nitre* (tho' corrected by an equal Quantity of *Sal Vol. Oleos.* or *Spirit of Hartshorn*, by which it is changed into a *Sal Neutrum* or *Compositum*, and so rendered a gentle *Diaphoretic*) sits very ill here on the Stomach, and is soon loathed by the sick Person. The very vegetable Acids, as Lime or Lemon Juice (I have often remarked) seem to give offensive Irritations to that Bowel, though only used to acidulate Sage Tea.

When an accurate Knowledge of the Nature and History of the Distemper is obtained, and the Physician is now able to form a just Idea of the true Causes that distress and disturb all the vital

tal, natural, and animal Actions of the Body, he will soon discover the *Causa Proxima*, and by attentively considering and comparing the Remedies that have hitherto been found either nocent or beneficial, he cannot well be at a loss in pitching upon the right Method of Cure, or in the Choice of proper Means and Instruments of compassing that desirable End *.

Whoever has been conversant with Authors who have treated of the *Plague*, must have found among them (*Bottallus* and a few others excepted) an universal Consent, that all Evacuations, by which the Tone of the Blood is broken, and the Spirits exhausted, are attended for the most part with fatal and calamitous Effects; and that no Remedies give such safe and sure Relief as generous *Alexipharmacs*, *Diaphoretics*, and *Sudorifics*. The Distemper now reigning is certainly of the Pestilential Kind, or at least of the nearest Affinity and Proximity to it. It is demonstratively made more Malign and Mortal by freely using Evacuations, and it submits without Difficulty to the right Use of *Alexipharmacs*, so given as to open the

* Medicus, si quidem suffecerit ad cognoscendum, sufficiet etiam ad sanandum. HIPPOCRATES. *De Arte*.

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Pores without inflaming the Body. And it really seems very strange to me, that this rational Method of throwing out the morbid Matter from the Vitals by Sweat, should be so long despised or overlooked, since Nature herself appears, from the Beginning, very strongly to indicate and endeavour to relieve herself this Way, the Skin being then generally moist, and the Pores open and well disposed for the Purpose. The Poison here is Spirituous and Volatile, and to be expelled from the noble Parts only by Effluvia, through the Channels and Pores of the Skin that the whole Circumference of the Body is most plentifully furnished with, along with the infected serous Particles. When these acrimonious and noxious Particles are cast off by a large and continued Diaphoresis and Sweat, the remaining Serum becomes better and purer, and the red disunited Globules are now at more Liberty to attract one another and come into fresh Cohesions; by which Means, the Tone of the Blood begins to be mended, its Texture strengthened, and a firmer Foundation laid for Recovery. But this should be attempted (generally speaking) within the first twelve Hours from the Invasion, before the Infectious *Labes* has made too great a Progress, and given too deep an Inquisition to the Juices; and I ought to inculcate

culcate this Remark with great Earnestness, as I have with Certainty found, that nothing is more detrimental to the Patient than Loss of Time, nor more apt to frustrate all our Services and Endeavours.

I must here give Notice, that when I mention the Words Sweat and Perspiration promiscuously, in Compliance with the more gross Use and vulgar Acceptation of those Terms, I am well aware, that in a physical Exactness they are two different Things that are performed in a very different Manner, and by different Organs. And indeed nothing is more common, than to express oneself by a commodious Phrase or Term, whose Sense may be at once apprehended by an impartial Person, though it be not strictly justifiable; as when by the Word Nature, we mean either the *Vis Vitæ*, or the Laws of the Animal Oeconomy, or even the whole Creation; and so of many others: Scarce any one has ever wrote but might incur Censure without this Licence given him, and every Man of Candor will allow the Benefit of it, when the Design of the Author is honest and benevolent.

But, however, it may be requisite for my present Purpose, and for the more fully informing those who in these Parts may possibly have wanted the Opportunities
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of receiving proper Lights, to give some short Explanation of the Distinction I have made of these two Cutaneous Evacuations; and to shew how great a Quantity of Humours usually passes by the Vessels of the Skin, and how easily any noxious Matter may be protruded through them. There is an infinite Number of small Emissary Ducts arising from the *Miliary Glands* under the *Cutis* throughout the whole Periphery of the Body, that have each of them their Orifices opening under the Scales of the *Epidermis*, in the Bottom of its Furrows, and each endowed with a proper Valve to open or shut, as Occasion requires: These are the true *Sudorific* Vessels. But besides these, there are two other Sorts that sometimes emit Sweat; viz. one Sort called the *Vasa Ruyschiana*, from the Discoverer Dr. *Ruysch*, that arise in most minute Tubes from the fine Intertexture of the *Subcutaneous Arteries*, and open likewise outwardly; the other Sort are large, perpendicular, hollow Cylinders, through whose Sides or Walls inwardly a great Number of *Sudorific* Pipes exhale their Contents into the Cylindrical Cavities, where the Matter is sometimes so condensed and indurated into a darkish Paste, as to be mistaken for Worms in the Skin, especially in the Face; upon which, People are apt
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(ignorantly enough) to squeeze those tender Vessels between their Nails, in order to press out the imaginary Worms, and often do much Mischief thereby. The *Perspiratory* Vessels open obliquely in the Area or Sides of the Furrows of the Scarf-Skin (for the Tops of the Ridges, observable to the Eye in the Ends of the Fingers, consist merely of small Nervous Papillæ for the more exquisite Sense of Feeling) and are of so great Subtily, that *Leeuwenhoek* has computed a common Grain of Sand will cover One hundred twenty-five Thousand of their exhaling Mouths: These are perpetually (except in case of Sweat) transpiring, in an invisible and insensible Vapour, such Particles of the Solids, as are by the Force of Circulation abraded from the Sides or Ends of the smallest Vessels, or such Particles of the Fluids, as are, by their too great Minuteness and Volatility, rendered unfit for the Nourishment and Repairs of the solid Parts, and have perhaps acquired some degree of Acrimony by their great Attrition and Comminution; and it is taken for granted, that a Quantity of volatilized Oils and Salts, which it might be dangerous to retain longer, are thus constantly thrown out of the Blood. These Organs of Perspiration are so different from

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those

those of Sweat, that 'tis now become a well known Maxim, the more a Man sweats the less he perspires, and *vice versâ*, the more he perspires the less he sweats; for when by a large and strong Appulse of Humours the Sudorific Vessels are enlarged in their Diameters, the Perspiratory are thereby necessarily so compressed, as not to be able to transmit much Vapour; and, on the contrary, when the Diaphoretic are most open and free, the others must have their Sides collapse, or be pressed together so close, that little or nothing can transude through them. Either of these Evacuations is very great and expensive, though more or less, according to the Season of the Year, the Climate of the Country, the Age, Sex, Temperament, Exercise, Regimen, Health, or Sickness of the Person: The old Disease called *Sudor Anglicanus* may evince, that all the Juices of the Body might be exhausted in a little Time by the former; and *Sanctorius* has demonstrated, that by the latter Five Eighths of all that is eat and drank are imperceptibly carried off, and that it exceeds all the other Excretions of the Body put together; and it is found to be always largest, when the *Atmosphere* is most cold, dry, and heavy, or the Air least impregnated with Moisture and Vapours, which

which remarkably intercept the *Atmosphere's* incumbent Weight.

A Contemplation of this wise and wonderful *Mechanism* (of which what has been now hinted of the exterior and superficial Parts, will serve at least to give some imperfect Idea) and a Consideration of the constant Waste of the human Frame, by insensible Perspiration and otherwise, will, I hope, excuse my adding here a few cursory Remarks: 1st, That the very *Vita* would soon destroy us, were not the Loss of the Fluids perpetually supplied, and the Detritions of the solid Particles immediately repaired at the same Time, and by the same Force exactly: 2^{dly}, That the true Nutrition of the Body (for I do not mean the sudden Refection from Meat and Drink) is not performed in the large Channels, nor by the grosser Parts of our Aliment, or even of our Blood, but in the most exquisitely fine and tenderest Vessels, and by Juices that must have passed through innumerable Degrees of Fluidity, before they become perfect and duly fitted for the aforesaid Supplies and Repairs: 3^{dly}, That in the State of Infancy, our Vessels are by much the most numerous, and consequently the Fluids do then vastly exceed the Solids; in full Maturity, there is as

it were a sort of *Æquilibrium*, many of the *Vasa minima* being by that Time changed into *Fibrous Elastic Stamina*, for the due Strength and Firmness of the Frame: In Old Age, the Vessels are by much the fewest, and consequently the Solids do then greatly exsuperate the Fluids: 4thly, That the Decrement or gradual Decay of Old Age is owing to nothing else than to a daily Loss of some of these finest Vessels (as well the internal as the cutaneous) through Compression, Concrecence, and Coalition, to which the resisting Weight of the *Atmosphere*, Muscular Motion, the very Circuition of the Humours, and the never-ceasing Pulsations of Myriads of Arteries, do chiefly and constantly contribute; until at length there is scarce any Circulation but in the *Vasa Majora*, the Skin grows all over withered and imperspirable, the greatest Vessels (whose Sides are made up only of an Infinitude of smaller ones) becoming hard and compact; the Tendons turning into meer Cartilages, and the Cartilages into Bones. 'Tis probable such Observations may not be intirely useless to many of the *Barbados* Practitioners, though there is Danger of their being unprofitable to the very unlearned Reader, and perhaps impertinent to the learned.

I come

I come now to describe my own Method of Practice, which Experience and uncommon Success have sufficiently justified, where-ever my Assistance has been sought for in Time.

When I am called to a Patient, I first examine if he is sensible of acute shooting Pains in his Head and Small of his Back, and of Oppression about the Vital Region. If I find he has those Complaints along with the other early obvious Symptoms above set forth, I acknowledge the Presence of the Malignant Guest, provided there can be no reasonable Apprehensions of the Small-Pox. My next Enquiry is, if he has been Bled; if not, I then frequently order one moderate Draught to be taken from his Arm or Jugular, proportionable to the Constitution and other Circumstances of the sick Person, as has been before mentioned on the Subject of Bleeding: But if I find he has been already over largely bled, or often, and especially if he has been harassed with an Emetic too, I judge him to be at the best in a very Lubricous Situation, the Stomach generally at that Time receiving Medicines with Reluctancy, or with great Averfation rejecting them back, which makes it exceedingly difficult to extort such constant and diffuent Sweats as are required: But if, fortunately, nothing at all

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all has been done to throw such shocking Impediments in the Way; and if the happy early Opportunity is still subsisting, I have Encouragement enough to hope and expect the best, and so proceed in the following Manner.

I order the sick Person to keep carefully his Feet, Arms, and Shoulders under the Bed-clothes, and his Body to be all over well covered with the Sheet, and a warm Coverlet or Blanket; and this I give strictly in Charge to the Nurse who is employed about him, with these further Directions, that during the Time of Sweating, the Patient be not suffered to lie too supine, but with his Body somewhat raised, and his Head more elevated than usual, upon a Pillow that is not over soft or sinking; let his Head be covered only with a thin Cap, and not kept too warm; it would not be amiss if it were shaved too, if such a thing in this Hurry could be readily and conveniently done: When the Sweat is sufficiently over, let him endeavour to sit up as much as he is able, or be now and then supported in such an erect Posture, if the Giddiness which frequently attends all the Stages of this Distemper will permit: By these Cautions, too forcible an Appulse of Blood may be ward-
ed off from the Brain, and the *Coma*
and

and *Phrenitis* either prevented, or at least mitigated considerably. Then I immediately (after these general Orders given) prescribe this, or the like *Alexipharmac* Julep; viz.

℞ *Aq. Lact. Alexiter.* ℥v. *Theriaca.* ℥iii.
Spir. Lavend. Comp. ℥iii. *pulv. è Chel.*
Cancror. comp. ℥i ℥. *Lap. Contrayervæ*
℥i. vel ℥℥. *Syr. de Croco q. s. ut f. Ju-*
lep. cujus sumat cochl. ii. omni biborio
superbibendo copiosè Thæam ex foliis Sal-
viæ confectam, vel liquorem posseticum
cum Vino Canariensi alteratum, vel de-
coctum radicis Chinæ.

Sometimes, if the Patient does not readily sweat, I order the following Powder to be given every Four Hours; viz.

℞ *Pul. Gasconic. gr. xii. Lap. Contrayervæ*
℥ Croc. Angl. ana gr. iv. Cochinill. gr. vi.
Camphor. gr. ii. m. f. Pulv. pro unâ dosi,
sumend. ex haustulo Vin. Maderens. me-
racioris cum aromatibus calefact. calidè
superbibendo ut priùs liquores quosvis
sudorem moventes.

The Tea or Posset-drink I direct likewise to be often given him at other Times. *Venice Treacle*, *Mithridate*, and the like, are recommended by many Writers of Note on these Occasions; but, with Submissi-
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on to such great Authorities, I apprehend their Opiate Ingredients and Narcotic Qualities are sufficient to forbid the Use of them in this Disease, at least unless a Number of sinking Stools make it necessary. When the Eruption of Sweat is by these Means continued in a copious and profuse Manner for Twenty-four Hours or more, it seldom fails to assuage the Fury of the Fever, gives a sensible Relief to the Anxiety, and usually prevents or overcomes the great Propensity to Reaching and Vomiting, Jaſtations, Yellowneſs, Sickneſs, &c. But I generally endeavour to keep up the Sweat or Moisture of the Skin (though in a much more moderate Manner) for two or three Days longer, and a good *Diaphoresis* during the whole remaining Course; which is easily done by frequent Supplies of the aforesaid Liquors. After the first Day, I freely allow the Patient thin Chicken Broth as often as he desires it; and I always found it useful and necessary thus to support Nature's Strength, by a Nourishment so safe, smooth, and digestible, and of such ready Assimilation with the Blood; besides, he might possibly sink under those expensive Sweats, if his Forces were not duly sustained: And for the same Reason too, at this Time, I allow him now and then a Glass of *Canary* or *Madera* Wine a little diluted, besides

besides Gruels and Panada's with Wine added to them, Sack-whey made richer than ordinary, and such Kinds of light refectionary Nourishment, which now prove to be of great Emolument and Service. If there has been no Stool voided for two or three Days, I admit of a Clyster of New Milk and brown Sugar being applied, particularly when there is an apparent Uneasiness in the Bowels from the Hardness of the Excrement, or by retaining it too long: On this Occasion too, and sometimes upon other cogent Considerations, such as obstinate Perseverance of the Symptoms, some Degree of Vomiting still remaining, or Yellowness not easily receding, it is customary with me to order a Lenitive Purge, divided into small Doses; viz.

℞ *Rhubarb. elect. pulv. ℥i. Mann. puriss. ℥ss. infund. calidè in Aq. Cinamon. bord. ℥iii. Dividatur colatura in tres quatuorve doses sumend. per vices & intervalla, prout opus est. Vel,*

℞ *Mann. optim. ℥i. vel ℥i ss. dividatur in quatuor doses, quarum una propinetur ægro ex liquore possetico prius descripto, quâlibet horâ vel sesquihorâ, donec incipiat turbari alvus.*

This perhaps I repeat again more than once, as I see Occasion, if no evident Deficiency

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ficiency of Strength and Spirits forbid it. If in the Midst of the Disease, but most peculiarly in its Decline, any Number of loose Stools should suddenly burst away, as is now and then observed, I put a Check to them immediately by the following Cordial Clyster; *viz.*

℞ *Diascord.* ℥iii. *vel* iv. *Terebinth. Venet.*
 ℥ii. *Vitell. Ov. N^o 1. Lact. Vaccin. rec.*
 ℥iii. *vel* iv. *m. f. Cl. statim injiciend.*
 & *per aliquod tempus retinend.*

It is of the highest Consequence to suppress this dangerous supervening Symptom, as soon as possible; for otherwise, the Body will quickly be reduced to so low and feeble a Condition, that no Art afterwards can prevent it from falling into cold Sweats, cadaverous Coldness of all the extreme Parts, black bloody Stools and Vomits, and so into the Arms of Death: And therefore if the Cordial Clyster (tho' repeated) has not fully obtained the desired End, the Necessity of speedy Relief is so urgent and important, that it encourages me sometimes to order a light but warm Cordial Anodyne, such as a Dose of *Venice-Treacle*, or the like, dissolved in a Glass of burnt Wine, or even in a Dram of burnt Brandy; which at this great Juncture, and this only, may be repeated again, if it be found still wanting.

As

As to the accidental Symptom of Bleeding at the Nose, Lips, Gums, Tongue, or Palate, though 'tis apt to alarm the By-standers, and frighten the Person himself, yet I have often found it rather to relieve than hurt, provided the Quantity so lost be not too great or too sudden; for I take this Blood that bursts and forces itself a Passage through the finest Capillaries, to be so thin, colliquate, and acrid, that it is rather an Happiness that it thus discharges and separates itself from the remaining Mass: Of the great Danger of very large *Hæmorrhages* from these Parts, I have taken Notice before. The *Yellowness* ('tis true) will sometimes shew itself, at least in some Degree, notwithstanding all the Means that have been used to prevent it: But if the *Sudorific* Method has been opportunely followed, it generally comes on late, if at all, and the Degree of it is so light, that 'tis no more than what Nature herself (almost unassisted) can easily master; or if it should be more heavy or obstinate than what was expected, a seasonable Lenitive or two may relieve and remove it. It happens very frequently that the Patient has little or no Refreshment of Sleep for some Nights successively in the Beginning of his Illness; but this does in no wise induce me (for Reasons above set forth) to offer an

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Anodyne, or deter me from pursuing my Method with Exactness and Care: For as soon as the Rage of the Distemper is, by the Means of Sweat and *Diaphoresis*, overcome, and the Hurry of Nature sensibly asswaged, as it seldom fails to be by this Treatment, the Patient himself begins to rest with Comfort and Satisfaction; his Pains then go over, his Spirits begin to be raised, a visible Amendment is felt in every Part, and all the Functions of Life return gradually to their natural Order and Constancy, tho' a sensible Weakness must remain for some Time. As soon as the Strength is somewhat repaired, a Lenitive Purge is to be taken, which will compleat the whole Cure, by cleansing the Body of the Impurities or Feculencies that the putrid Distemper may have left behind it. This last Purging is so highly necessary, that through the Neglect of it, I have known the Patient some Time after to be suddenly surprized with a severe torminous *Diarrhœa*, attended with Fever and Deliria; and so (though happily still escaping) pay dearly enough for his Folly and Obstinacy. During this whole Course, I keep the sick Person in a Perspiratory Condition; but as soon as the just Season of Sweating is past, I then (besides the Directions before given in Charge) order some Part of his Covering to be removed, and the Room
by

by Degrees to be made somewhat more cool; for which End, I choofe for him, if poffible, a large Chamber, and not expofed to the hot Beams of the Afternoon's Sun; and I allow fome Air to pafs through, yet without fuffering it to blow upon the Bed; for I have feen the Admiffion of too much (particularly upon a Body uncovered and almoft naked, as Patients often choofe to lie in this hot Climate) attended with the worft Confequences: In very hot Weather it may be requifite, about the Meridian Hours, to fprinkle the Floor with Rose-water and Vinegar.

I muft now earneftly defire due Notice may be taken, that though the Method I ufe may be faid to be *Alexipharmac*, yet it is by no means hot, parching, or inflaming; and that this Moisture or Sweat I endeavour to extrude, is rather to be attributed to the Quantity of *Tepid Diluents*, as Sage-tea, Sack-whey, &c. than to the real Heat of the Medicines themfelves. And I have often thought, that in Malignant Fevers the *Alexipharmac* Practice has fometimes been brought into Difreputation, either by the Phyfician's over-doing through too abundant Zeal for it, or by uſing it at an improper Seafon, or for want of Advertence to the great Neceffity of copious Diluters: And perhaps this other Reafon may be properly enough affigned for the
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the present great Difuse of this Practice amongst most Physicians. In the ordinary Intercurrent Fevers, where the Blood is for the most part Viscous and Pleuritical, the forcible extorting of early Sweat is found evidently to be hurtful, as the hot *Cardiac* Regimen, which is used for that Purpose, only adds fresh Fuel to the Flame, and often brings on *Coma's*, *Phrensies*, and other dangerous Symptoms, instead of throwing off the *Materia Febrilis*, which is not yet concocted or duly prepared for Expulsion. The ignorant common People indeed are of themselves too apt, upon every slight Indisposition, to swallow down a Dose of *Venice-Treacle* or *Mithridate*, and so procure (as they imagine) a cheap Sweat, which no doubt proves fatal to many. It may not be improper to mention here, that the great *Observator Doctor Sydenham* first attempted to cure the Pestilential Fever by Bleeding, and imagined for some Time, that he had sufficient Success in this Way; but he afterwards thought fit to change this Method for the *Alexipharmac*, and had the Integrity to own that it proved the more successful *, as it

* *Quin & Febris Pestilentialis causa, cum tenuissima sit, & perquam subtilis, vel in primis morbi diebus, sudoribus diffuari potest, suffragante ubique experientiâ.*
SYDENH. De Feb. cont. Ann. 1673.

certainly

certainly was the most reasonable; the peccant Particles being in this Case so thin, subtil, and fugacious, as to be able to pass nimbly away through the Pores along with the Sweat. However, I ought to observe, that the Administrations which were so wisely contrived, and succeeded so happily in that Pestilential Fever in *England*, would not quadrate exactly with ours of *Barbados*; for though they have in many Points a near Resemblance to one another, yet there is this essential Difference between them, that the Blood in the former is described to be *Pleuritical* or *Rheumatical*, but in this latter it is exceedingly loose, thin, and free from Size: And therefore, I apprehend, for Reasons already mentioned, that the *Opiate Quality* of *Sydenham's Sudorific*, and the Strength and Largeness of his *Purgative Potion*, would really be of mischievous Consequence in the Fever I am describing; so that tho' the chief Indications are the same in both, yet the practical Instruments must be somewhat different.

I must acknowledge, that I was formerly misled by the prevailing popular Heresy in my Opinion concerning this Fever, and I treated it for some Time accordingly; until meer practical Observation (the only true Guide) had convinced me of the Faithlesness and Insecurity of that Method,

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Method, and obliged me to make a closer and severer Scrutiny, by examining every Symptom, natural or accidental, with more serious Attention than what I found had been done to my Hands, and by comparing or balancing the Mischiefs and Benefits of the common Administrations, still watching Nature's own Biass and the Indications she suggested: Upon which I soon found (or imagined I had found) very justifiable Grounds for altering my Practice in the Manner here described. But I can solemnly declare, that (besides the Suffrage of Reason, which seems to plead strongly on my Side) I have since had the faithful Testimony of many Years Experience. Notwithstanding, I dare not alledge, that this Way will absolutely never fail of Success; for it is easily perceivable, that the Distemper itself is of the most dangerous Kind, and a small Inadvertency in the Practitioner, or Error in the Patient, may prove equally destructive, as it often happens even in Diseases of inferior Note: But I can safely promise, that this Method, under the Management of a prudent Conductor, will always be found much the best and surest of any that have been yet attempted.

I have already pretty fully explained myself, how (when the true Season of employing this Method has been lost or overlook'd too long) the Use of Lenitive
Purges,

Purges, under due Cautions and Restrictions, must be called in; and therefore I refer now to what has been said before on the Subject of *Purgatives*.

But nothing surely could be more beneficial to the Poor (among whom common Sailors, who are the greatest Sufferers, have a Right to be included) than to devise some Remedy of easy Purchase and ready Use, which might be at hand upon all Occasions; for the Suddenness of their Seizure, and the urgent Necessity of speedy Assistance, for the most part give very little Time to wait for officinal Compositions. In such Cases I imagine, that giving immediately, upon the first Invasion of the Symptoms, a good Dose of warm * *Snake-root-wine*, then covering the Body well in Bed, and provoking plentiful Sweats for the Space of a Day and Night, by large and frequent Draughts of Sage-Tea, or any other Sudorific Liquids, might be greatly serviceable, and contribute not a little to overlay the Disease in its Infancy. I own I have never yet tried it myself, having generally found other Medicines in Readiness enough, and likewise through Fear, that if a copious Sweat

* NB. Since the writing of the above, this has been tried with very good Success.

should not quickly flow, the great Warmth of such a Draught should augment the Fever, and usher in the whole Train of its dismal Attendants. However, the Practice appears to me reasonable; it has been sometimes advantageous even in the more common Feverish Cases, and I leave it to be determined by future Experience.

Nor can I at present undertake to write my Sentiments definitively in regard to the Use of the *Peruvian Bark*, in the Declension of this Fever. The *Cortex* is certainly of known Efficacy in preventing Dispositions to Mortification, and in stopping its further Progress when actually begun, as well as in fortifying a weak Tone of Blood; and therefore it is probable, that when the Heat begins to abate, and the Pulse is lowered, this might be the proper Time for administering it, either in Tincture, Infusion, or Decoction: But I declare I could never yet meet a fair and safe Opportunity of offering it, the Stomach being on these Occasions generally so tender and delicate, and so apt to be thrown into Irritations by such an harsh unpalatable Drug, that I have not dared to venture upon it. Notwithstanding the Use of it is highly commended by those who have frequented the *Guinea Coast*, where they are often attacked by ill-natured and irregular Fevers, that are perhaps *sui generis*,

neris, and peculiar to that unhealthy *Ma-roon* Country. This Disease may possibly be changed into an Intermittent after large Evacuations, if the Patient happen luckily not to die under them, before this Scene can be brought about, which good Fortune is much to be doubted, and I am sure he would be very unwise that should depend upon such a dubious Chance: But should the Matter really prove so, the Service of the *Bark* is then self-evident.

It should have been observed before, that the apparent Danger of catching the Infection by dissecting the Bodies of the Dead, joined with the intolerable Stench, that almost immediately issues from them, gives such a general Impression of Fear and Horror, that we have hitherto wanted the Advantage of the many Lights that might be obtained by such Examinations. But I am credibly informed by an ingenious young Gentleman, Surgeon to one of His Majesty's Ships, that he ventured to open the Body of one who died of this Illness under his Hands; upon which (tho' the Operation was hasty, and consequently his Enquiry not over curious) he found the Stomach, Diaphragm, and many of the adjacent Parts, seized with a deep Mortification. *Helmont*, speaking of the Plague itself, has these Words, "*Plerum-*
que notavi Pestem circa stomachum prima
I 2 " *sedi-*

“ sedilia locasse.” And *Paræus* has likewise observed a *Pestilential Anthrax* in the Stomach.

The History of this Disease requires, that a Description should be given of the Seasons and Weather, and their successive Alterations, in order to shew how far they might have had an Influence in producing the *Epidemical Contagion*. *Hippocrates* gives Authority and Rules for doing this; and indeed the frequent Neglect of it, is the only fair Objection or Imputation that can be justly laid to the Charge of the accurate and judicious *Sydenham*. But as I am fully convinced, that the present Malignity does not owe its Birth to any different Temperatures of our *Atmosphere*, nor to any Vapours or Exhalations from the Surface or Bowels of our little Spot of Earth (however it might have been since nourished or supported by any such Means) I need only make this general Observation: From the Beginning of this last Introduction of the Pestilential Fever among us (which happened in the Winter Season of the Year 1733, as was hinted before) the Weather, and the Air in respect of its primary Qualities of Heat, Cold, Drought, and Moisture, suffered no other signal Variations, than what were usual here in the healthiest Times; we had alternately dry and rainy Seasons, each continuing often
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for some Months successively, but the dry did certainly prevail most; no *Hurricane* has been felt (I mean in this Island) during that whole Space; we enjoy almost the Year round constant refreshing Breezes of the Trade-Wind, which only varies a little between the East and North Points, except that in the Months of *July* and *August* (which we call the Hurricane Months) and sometimes later, the Wind frequently blows from the South or West, or the Points between them; nor has there been the least Appearance of any uncommon *Meteors* in the Sky from that Time to this: What the hidden Influxes of *Cælestial* Bodies may have done, we are not capable of knowing.

During the Tyranny of this Fever, common *Sporadic* Distempers appeared now and then as usual, such as *Angina's*, *Peripneumonies*, *Asthma's*, *Pleurisies*, *Rheumatisms*, *Colds*, *Coughs*, *Diarrhæa's*, *Dysenteries*, &c. which however were not so general as to deserve the Name of *Epidemics*, nor did seem to have any Relation to the predominant Constitution of the Year; but (as it mostly happens in these Parts) shewed themselves chiefly upon the setting in of rainy Weather, of which they seemed to be in some Measure the immediate Offspring; though, no doubt, the foregoing Droughts might have disposed the

the Body and Humours for their Production; the Heats and Droughts bracing the Fibres and occasioning an Inflammatory *Diatheſis* in the Blood, and the Rains giving Riſe to Viſcoſities of the Humours, Stoppage of Perſpiration, and Relaxation of the Fibres. In almoſt all theſe, the Blood, when drawn, had an Inflammatory Cruſt reſembling that of Pleuritical or Rheumatical Caſes, and exceedingly different from what is conſtantly obſerved in the Fever now ſpoken of; as has already been ſhewn. As to the Intermittent Tribe, either *Autumnal Quartans*, or *Vernal Tertians* and *Quotidians*, it is certain they are rarely (if ever) the genuine Growth of *Barbados*, let the Weather vary ever ſo much: Indeed Continued Fevers do ſometimes here, as in *Europe*, upon their going off put on the Genius of Intermittents, and Patients labouring under Agues are often brought up here from other Parts: But it is notorious, that all the uninhabited Iſlands, which are not many Leagues diſtant from us, and lie ſtill covered with thick Woods, as *Tabago*, *Saint Lucy*, *Saint Vincent*, *Dominique*, &c. are ſubject to them in a very eminent Degree, for Reaſons too obvious to be now related, which both King's Ships and Traders are ſenſible of to their Coſt, if they only remain a Fortnight or Three Weeks in thoſe Harbours;

Harbours; and these are frequently obstinate and irregular, often resembling double *Tertians*, though with due Preparation and Precautions they submit, at length, to the Use of the *Bark*. The Freedom we enjoy in this Place from such importunate Visitors, I take to be chiefly owing to the great Purity and Freshness of our Air: But yet there are other Causes of it too that well deserve Notice; for, 1st, All the different Stages of the Year are scarce distinguishable from one another by the Heat of the Day, except that in the Winter (if Winter it may be called) the Evenings and Mornings are sensibly cooler: 2^{dly}, Our Rainy Seasons are mostly in the Summer Months of *June*, *July*, and *August*, and the Moisture that then falls is soon sucked up again both by the hot Beams of the Sun, which is at that Time almost perpendicular in its Meridian Height, and by the Fanning of our constant Breezes: And, 3^{dly}, our Autumns and Winters are generally tempered with the driest Weather; so that there is hardly any Opportunity for Intermittents to erect their Heads.

How it may be in the *Leeward Colonies* I cannot precisely say, but it is to be presumed, that *Antigua*, *St. Kitts*, *Nevis*, *Montserrat*, &c. (as they are now well cultivated) perceive no very essential Differences any Way; and for that Reason I suspect, that
their

their MALIGNANT FEVER is much the same as ours, and that it was derived to them from this or some other Place, but is by no means the natural Produce of their own Climate, though it is reported to have been much more fatal there than here: Whether their Air or Earth may have any peculiar Properties, more apt to encourage, or more agreeable to the Nature of such an Infection, is utterly a Mystery to me. I likewise do much suspect, that the Opinion which has lately prevailed there, of the Distemper's being originally occasioned by some corrupted Ponds, is not very just; for in such Case, they would scarce ever be free from it, the same Cause ever subsisting in all long Courses of dry and hot Weather; besides, they are blessed with the same Winds and fresh Breezes as we are, by which the Vapours are perpetually blown away from off the Face of such narrow Tracts of Lands, and cannot possibly stagnate over such Ponds, so as to fill the Air with Infectious *Miasmata* of the most horrible and most venomous Sort: Were their Grounds still overspread with Woods, or remarkably covered with unwholesome Lakes or Marshes, something might be said in Favour of such an Opinion: But, I am persuaded, had exact Enquiries been made upon the first Appearance of this Disease among them, it would have been

been found to have proceeded from some other Quarter.

In this Space of Time there arose here a few other Diseases, that were really Epidemical and of the Contagious Kind too, few escaping them in Families where they had once got a Footing. The first was an obstinate and ill-favour'd Erysipelatous Quinsy. The second, a very Anomalous Scarlet Fever, in which almost all the Skin, even of the Hands and Feet peeled off. The third, a Suffocating Cough, that in the Year 1737, and Part of 1738, spread itself over all Parts of the Island, and was sometimes Convulsive in Children and young People, upon whom it exerted its Anger most. The fourth, the Small-Pox, which has continued longer than ever it was known to do before, and is not yet quite departed from us. Of these I need not give any particular Description at present; but there is great Room to apprehend, that their spreading so far and wide, was in some measure influenced and forwarded by the Constitution now reigning, and that some of them were Creatures of it.

It is no unjustifiable Boldness to assert, that within these last six Years, or thereabouts, His Majesty has lost, by means of this MALIGNITY, in and about his Sugar-Colonies, upwards of Twenty Thousand very useful Subjects, the much greatest Part
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74 *Of the* MALIGNANT FEVER

of whom were Sea-faring People; which abundantly shews the Necessity of making the most faithful and diligent Searches into the Causes, Nature, and Cure of this dire Distemper. Some honest and fair Attempts towards the obtaining a more perfect Knowledge of it are now offered, which possibly may not be unacceptable to any who have the Preservation of their Fellow-Citizens at Heart; especially, as Endeavours of this sort are highly wanted, and have been unfortunately too long neglected.

I have, I think (without omitting any thing material) given a brief Account of this reigning Constitution; in doing which, I have rather studied Weight of Matter than Elegancy of Stile, and Usefulness rather than Ornaments: I have endeavoured to make my Reasons plain and obviously intelligible, and the Inferences easy and natural: I have avoided using Technical Words, or Terms of Art, as much as the Nature of the Subject would bear, or the Significancy of the Sense required; and I have been shy of embellishing my Remarks with Quotations (as might readily have been done) out of the learned Languages, which indeed would only shew Ostentation, and could be of very little Service to those, for whose Use this *Treatise* is principally designed.

I have

I have no fond Pretence of obtruding my Opinions, or any other View, but to explain and enforce my own Observations, which I have Ground to believe are founded upon Truth and Matters of Fact, and which I hope will prove of Advantage to many, when more generally known and brought into Practice. For *Apology*, I beg Leave to use the Words of a *Great Man* already mentioned; *Illam tantum mihi veniam peto, quod minus accuratè, quàm proposueram, morbi historiam ac curationem descripsero; cum non tam metam figam, quam animos iis addam, qui feliciori ingenio præditi ad hoc opus postea se accingent, quod jam ego imperfectè molior.*

F I N I S.



I have no doubt that the
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of such Truth and
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THE END

Warren, Henry

A treatise concerning the malignant Fever in Barbados and the neighbouring
Islands

London 1741

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